CLAIMS

It is claimed:

1. A method of providing a user computer with access to files of a network, the method comprising:

establishing a communication link from the user computer to an access control system of the network;

launching a viewer program that controls the status of the communication link;

detecting times when the user is not actively sending or receiving data from the network, and downloading ad files from the network to the user computer during such times, such that the viewer program maintains a pool of ad files at the user computer for display and performs ad pool management tasks;

periodically opening a viewer program window in which a next ad file from the ad file pool is displayed;

hiding the viewer program window after a predetermined number of ad files from the ad file pool have been played and keeping the viewer program window hidden for a predetermined quiet interval; and

managing the ad pool so as to keep track of the number of times each ad file in the ad pool has been viewed and determine when each ad file in the ad pool should no longer be viewed.

2. A method as defined in claim 1, wherein managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed a predetermined number of times.

3. A method as defined in claim 1, wherein managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed for a predetermined number of calendar days.

4. A method as defined in claim 1, wherein managing the ad pool includes discarding an oldest ad file from the ad pool if the ad pool size exceeds a predetermined size limit value.

5. A method as defined in claim 1, wherein managing the ad pool includes not tracking an ad file as having been viewed if the viewing of the ad file is prematurely halted before normal completion.

6. A method as defined in claim 1, wherein the viewer program maintains an ad information table of a local database in the user computer.

7. A method as defined in claim 1, further including periodically performing fraud control, wherein the viewer program sends a pulse message to the access control system at predetermined intervals, and the access control system causes the communication link to the network to be severed if it fails to receive an expected pulse message.

8. A method as defined in claim 7, wherein the viewer program maintains an ad information table that includes ad file information initially received from the access control system, such

that the viewer program compares actual ad file information determined by the user computer with corresponding ad file information in the table, and such that the access server causes the communication link to the network to be severed if there is a discrepancy.

9. A method as defined in claim 7, wherein the fraud control comprises comparing ad information in the local database with actual ad file information for the corresponding ad file, and indicating fraud if there is a discrepancy.

10. A method as defined in claim 7, wherein the viewer program terminates the network connection if fraud is indicated.

11. A method as defined in claim 1, wherein the access control system includes an Ad server that provides the ad files to a user, a Network Access Server that assigns a network address for an authorized user, and an Access, Authorization, and Accounting server that determines if authorization should be granted to a user.

12. A method as defined in claim 1, further including:

determining ad impression viewing data corresponding to the number of times each ad file in the ad pool has been viewed;

determining click through data corresponding to network addresses visited by the user during the viewing of an ad file; and

reporting the ad impression viewing data to the access control system.

13. A method as defined in claim 1, further including storing state information for the viewing program at the user computer.

14. A method as defined in claim 1, wherein the viewer program displays closed captioning information.

15. A method as defined in claim 1, wherein the viewer program tracks the number of online network access sessions by the user computer.

16. A method as defined in claim 1, wherein the viewer program tracks the time spent online with network access by the user computer.

17. A method as defined in claim 1, wherein establishing a communication link includes:

receiving user identification information;

verifying demographic information for the identified user stored at the access control system and providing the communication link;

collecting demographic information from the user computer in an initial registration and access operation, storing the demographic information at the access control system and identifying it with the registered user, and providing the communication link; and

otherwise terminating the communication link and denying network access.

18. A method as defined in claim 17, further including:

determining ad impression viewing data corresponding to the number of times each ad file in the ad pool has been viewed;

determining click through data corresponding to network addresses visited by the user during the viewing of an ad file; and

reporting the ad impression viewing data to the access control system.

19. A method as defined in claim 18, further including preparing a Demographic Report that summarizes the reported ad impression viewing data for multiple computer users over a current time period.

20. A method as defined in claim 19, further including providing the Demographic Report to a computer user identified as an ad file sponsor.

21. A method as defined in claim 19, wherein the Demographic Report includes demographic report fields that are selected by the computer user.

22. A method as defined in claim 19, wherein providing the Demographic Report includes providing archival reports for prior time periods.

23. A method as defined in claim 19, further including:

comparing an ad file having an associated demographic profile with demographic data for each of multiple registered users and identifying those registered users having demographic information that matches the demographic profile for the ad file;

identifying a time period over which the ad file should be played;

adding the ad file to a playlist for each registered computer user if the ad file is matched to the computer user demographic information and if the identified time period is available for the computer user; and

decreasing an available ad file impression number for each identified and matched computer user.

24. An access control system that provides a user computer with access to files of a network to which the user computer is connected, the access control server comprising:

a central processing unit that can establish communication with the user computer;

program memory that stores programming instructions that are executed such that the access control system receives requests from the user computer for ad files, wherein the user requests are generated by a viewer program of the user computer after detecting times when the user is not actively sending or receiving data from the network, such that the viewer program maintains a pool of ad files at the user computer for display and performs ad pool management tasks, and wherein the viewer program sends a pulse message to the access control system at predetermined intervals, and the access control system causes the communication link to the network to be severed if it fails to receive an expected pulse message, further wherein the viewer program maintains an ad information table that includes ad file information initially received from the access control system, such that the viewer program compares actual ad file information determined by the user computer with corresponding ad file information in the table, and such that the access server causes the communication link to the network to be severed if there is a discrepancy.

25. An access control system as defined in claim 24, wherein the access control server compares ad information in the local database with actual ad file information for the corresponding ad file, and indicates fraud if there is a discrepancy.

26. An access control system as defined in claim 24, wherein the programming instructions cause the access control server to establish a communication link with the user computer by performing the operations of:

receiving user identification information;

verifying demographic information for the identified user stored at the access control system and providing the communication link;

collecting demographic information from the user computer in an initial registration and access operation, storing the demographic information at the access control system and identifying it with the registered user, and providing the communication link; and

otherwise terminating the communication link and denying network access.

27. An access control system as defined in claim 26, wherein the operations performed by the access control server further include:

determining ad impression viewing data corresponding to the number of times each ad file in the ad pool has been viewed;

determining click through data corresponding to network addresses visited by the user during the viewing of an ad file; and

reporting the ad impression viewing data to the access control system.

28. An access control system as defined in claim 27, wherein the operations performed by the access control server further include preparing a Demographic Report that summarizes the reported ad impression viewing data for multiple computer users over a current time period.

29. An access control system as defined in claim 28, wherein the operations performed by the access control server further include providing the Demographic Report to a computer user identified as an ad file sponsor.

30. An access control system as defined in claim 28, wherein the Demographic Report includes demographic report fields that are selected by the computer user.

31. An access control system as defined in claim 28, wherein the access control server further provides archival reports for prior time periods.

32. An access control system as defined in claim 28, wherein the operations performed by the access control server further include:

comparing an ad file having an associated demographic profile with demographic data for each of multiple registered users and identifying those registered users having demographic information that matches the demographic profile for the ad file;

identifying a time period over which the ad file should be played;

adding the ad file to a playlist for each registered computer user if the ad file is matched to the computer user demographic information and if the identified time period is available for the computer user; and

decreasing an available ad file impression number for each identified and matched computer user.

33. A user computer that receives files from an access control system connected to a network, the user computer comprising:

a central processing unit that can establish communication with the access control server;

program memory that stores programming instructions that are executed such that the user computer establishes a communication link from the user computer to the access control system and then launches a viewer program that controls the status of the communication link, detects times when the user is not actively sending or receiving data from the network, and uses such times to download ad files from the network to the user computer, such that the viewer program maintains a pool of ad files at the user computer for display and performs ad pool management tasks, and then periodically opens a viewer program window in which a next ad file from the ad file pool is displayed and hides the viewer program window in which a next ad file from the ad file pool is displayed, keeping the viewer program window closed for a predetermined quiet interval, wherein the viewer program manages the ad pool so as to keep track of the number of times each ad file in the ad pool has been viewed and determine when each ad file in the ad pool should no longer be viewed.

34. A user computer as defined in claim 33, wherein the operations performed by the user computer further include managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed a predetermined number of times.

35. A user computer as defined in claim 33, wherein the operations performed by the user computer further include managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed for a predetermined number of calendar days.

36. A user computer as defined in claim 33, wherein the operations performed by the user computer further include managing the ad pool includes discarding an oldest ad file from the ad pool if the ad pool size exceeds a predetermined size limit value.

37. A user computer as defined in claim 33, wherein the operations performed by the user computer further include managing the ad pool includes not tracking an ad file as having been viewed if the viewing of the ad file is prematurely halted before normal completion.

38. A user computer as defined in claim 33, wherein the operations performed by the user computer further include the viewer program maintains an ad information table of a local database in the user computer.

39. A user computer as defined in claim 33, wherein the operations performed by the user computer further include periodically performing fraud control, wherein the viewer program sends a pulse message to the access control system at predetermined intervals, and the access control system causes the communication link to the network to be severed if it fails to receive an expected pulse message.

40. A user computer as defined in claim 39, wherein the viewer program terminates the network connection if fraud is indicated.

41. A user computer as defined in claim 33, wherein the access control system includes an Ad server that provides the ad files to a user, a Network Access Server that assigns a network address for an authorized user, and an Access, Authorization, and Accounting server that determines if authorization should be granted to a user.

42. A user computer as defined in claim 33, wherein the operations performed by the user computer further include:

determining ad impression viewing data corresponding to the number of times each ad file in the ad pool has been viewed;

determining click through data corresponding to network addresses visited by the user during the viewing of an ad file; and

reporting the ad impression viewing data to the access control system.

43. A user computer as defined in claim 33, wherein the operations performed by the user computer further include storing state information for the viewing program at the user computer.

44. A user computer as defined in claim 33, wherein the viewer program displays closed captioning information.

45. A user computer as defined in claim 33, wherein the viewer program tracks the number of online network access sessions by the user computer.

46. A user computer as defined in claim 33, wherein the viewer program tracks the time spent online with network access by the user computer.

47. A program product for use in a computer system that executes program steps recorded in a computer-readable media to perform a method for providing a user computer with access to files of a network, the program product comprising:

a recordable media; and

a program of computer-readable instructions executable by the computer system to perform method steps comprising:

establishing a communication link from the user computer to an access control system of the network;

launching a viewer program that controls the status of the communication link;

detecting times when the user is not actively sending or receiving data from the network, and downloading ad files from the network to the user computer during such times, such that the viewer program maintains a pool of ad files at the user computer for display and performs ad pool management tasks;

periodically opening a viewer program window in which a next ad file from the ad file pool is displayed;

hiding the viewer program window after a predetermined number of ad files from the ad file pool have been played and keeping the viewer program window hidden for a predetermined quiet interval; and

managing the ad pool so as to keep track of the number of times each ad file in the ad pool has been viewed and determine when each ad file in the ad pool should no longer be viewed.

48. A program product as defined in claim 47, wherein managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed a predetermined number of times.

49. A program product as defined in claim 47, wherein managing the ad pool includes determining that an ad file should not be viewed after the ad file has been viewed for a predetermined number of calendar days.

50. A program product as defined in claim 47, wherein managing the ad pool includes discarding an oldest ad file from the ad pool if the ad pool size exceeds a predetermined size limit value.

51. A program product as defined in claim 47, wherein managing the ad pool includes not tracking an ad file as having been viewed if the viewing of the ad file is prematurely halted before normal completion.

52. A program product as defined in claim 47, wherein the viewer program maintains an ad information table of a local database in the user computer.

53. A program product as defined in claim 47, further including periodically performing fraud control, wherein the viewer program sends a pulse message to the access control system at predetermined intervals, and the access control system causes the communication link to the network to be severed if it fails to receive an expected pulse message.

54. A program product as defined in claim 53, wherein the viewer program terminates the network connection if fraud is indicated.

55. A program product as defined in claim 47, wherein the access control system includes an Ad server that provides the ad files to a user, a Network Access Server that assigns a network

address for an authorized user, and an Access, Authorization, and Accounting server that determines if authorization should be granted to a user.

56. A program product as defined in claim 47, further including:

determining ad impression viewing data corresponding to the number of times each ad file in the ad pool has been viewed;

determining click through data corresponding to network addresses visited by the user during the viewing of an ad file; and

reporting the ad impression viewing data to the access control system.

57. A program product as defined in claim 47, further including storing state information for the viewing program at the user computer.

58. A program product as defined in claim 47, wherein the viewer program displays closed captioning information.

59. A program product as defined in claim 47, wherein the viewer program tracks the number of online network access sessions by the user computer.

60. A program product as defined in claim 47, wherein the viewer program tracks the time spent online with network access by the user computer.